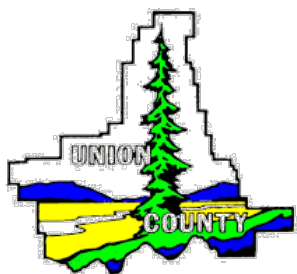


UNION COUNTY

# Local Road Safety Plan



2021



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# Welcome

*Roadway safety is a top priority for the State of Oregon and its Transportation Safety Action Plan (TSAP). Oregon envisions no deaths or serious injuries occurring on our roadways. In Union County, we support this vision. Union County has always prioritized safety, however, there is room for us to improve. Unbelted driver crashes are 27% higher in Union County than they are across the State. Between 2014 and 2018 there were 199 crashes on local roads in our County, with several occurring in La Grande and Island City.*

*In 2020, the Union County Safety Coalition formed. The Coalition included stakeholders from different agencies – engineering, enforcement, education, and emergency response – who reviewed the County’s crash data and helped shape this Local Road Safety Plan (LRSP). Stakeholders chose to focus on three emphasis areas for this LRSP: Infrastructure, Risky Behavior, and Special Populations.*

*Ultimately, this is a plan, born out of safety data analysis and collaboration amongst partners. It focuses on its Emphasis Areas and those presented in the TSAP to eliminate fatality and serious injury crashes on roads in Union County.*

*Please join us to reach our goals of improving infrastructure and eliminating fatalities and serious injuries for users of all modes on our roadways. By signing and implementing this plan, we hope that we will see more lives saved in Union County.*



# Introduction

In September 2018, the Union County Safe Communities Coalition for Transportation Safety and the Oregon Department of Transportation met to consider the development of a Local Road Safety Plan (LRSP) for the County modeled after the Oregon Transportation Safety Action Plan (TSAP). The Oregon TSAP's goal of eliminating deaths and life-changing injuries was of great interest to Union County stakeholders. In 2020, with the cooperation of the Federal Highway Administration (FHWA), Union County took the steps to develop a LRSP that would integrate elements of the Oregon TSAP into a plan specifically meeting the needs of Union County.

The LRSP development process uses a framework that identifies, analyzes, and prioritizes roadway safety improvements on local roads. The process results in a prioritized list of issues, risks, actions, and countermeasures/strategies that can be used to reduce fatalities and serious injuries on the 763 miles of County and city roads within the 2,039 square miles of the County.

Union County stakeholders developed the following Vision, Mission, and Goal statements to guide the implementation of the LRSP and to enhance safety for the 27,000 residents of the County.

## **Vision:**

*Union County envisions no deaths or life-changing injuries on the County transportation system.*

## **Mission:**

*Sustain a collaborative effort to implement a data-driven approach which identifies and addresses transportation hazards to eliminate fatalities and serious injuries crashes on Union County roads.*

## **Goals:**

*Develop and improve infrastructure to eliminate fatalities and serious injuries for users of all modes.*

*Transform public attitudes to recognize all transportation system users have responsibility for other people's safety in addition to their own safety while using the transportation system.*

# Local Road Safety Plan Methodology



Figure 1. Graphic. The LRSP Development Process (FHWA).

The development of the Union County LRSP follows the LRSP Development Process encouraged by the Federal Highway Administration (FHWA). LRSPs are one of FHWA's Proven Safety Countermeasures and has been followed by many counties across the United States. Union County adopted this process in developing the LRSP. They took the following steps to adhere to the LRSP process as shown in figure 1.

**Establish Leadership:** The Union County Safe Communities Coalition, made up of representatives from engineering, enforcement, education, and emergency response, met throughout the LRSP development process to contribute ideas and provide feedback.

**Analyze Safety Data:** The LRSP used a data-driven process to identify the key

factors that contribute to crashes and the locations of these incidents. Identifying these factors and locations helps to focus County and State resources in those areas that require the most attention.

**Determine Emphasis Areas:** The data analysis identified Emphasis Areas, or those areas of focus, where safety resources should concentrate. The identified Union County LRSP Emphasis Areas aligned with those included in the Oregon TSAP.

**Identify Strategies:** Within each Emphasis Area, a series of strategies/countermeasures and accompanying actions are included to address specific crashes and their contributing factors. Each action includes suggested responsible agencies that will shepherd its implementation.

**Prioritize and Incorporate Strategies:** Effort was taken to identify the time frame when actions could be implemented and prioritized with an effectiveness criteria. As some efforts are ongoing, they were also included in this LRSP to recognize how these current activities relate to road safety and to organize them within the framework of the LRSP.

**Evaluate and Update:** This LRSP is intended to be revisited periodically to track the progress of its strategies and actions. If trends change during the implementation of the LRSP, Union County should revise and update the strategies and actions as appropriate.



# Data Trends

As a data-driven plan, the Union County LRSP considers safety data including historical crash patterns, traffic counts, and roadway characteristics to determine areas that can benefit greatly from safety improvements.

Both the Oregon Department of Transportation and the Union County Public Works Department provided crash, traffic volume, and roadway characteristic data to inform data analysis that identified contributing crash factors. The data analysis in this LRSP focuses on non-State maintained roadways.

Between 2014 and 2018, there were over 451 crashes on Union County roadways, of which 6 were fatal and 14 included at least one serious injury. Figure 2 shows the location of crashes occurring over those 5 years. The map in figure 3, which accounts for the severity and clustering of crashes, shows that roads in the La Grande area as well as the Hunter Road corridor north of La Grande are key locations that could benefit from additional safety investment.

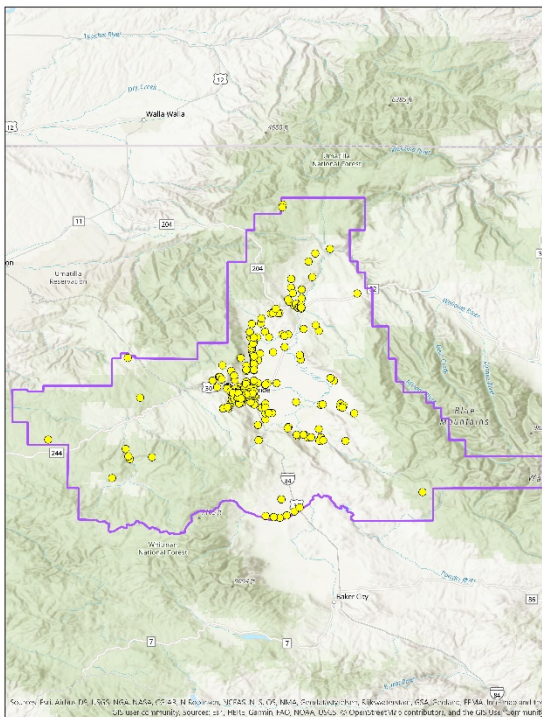


Figure 2. Graphic. Crashes on non-State Roads in Union County (2014-2018) (Source: Oregon Department of Transportation).

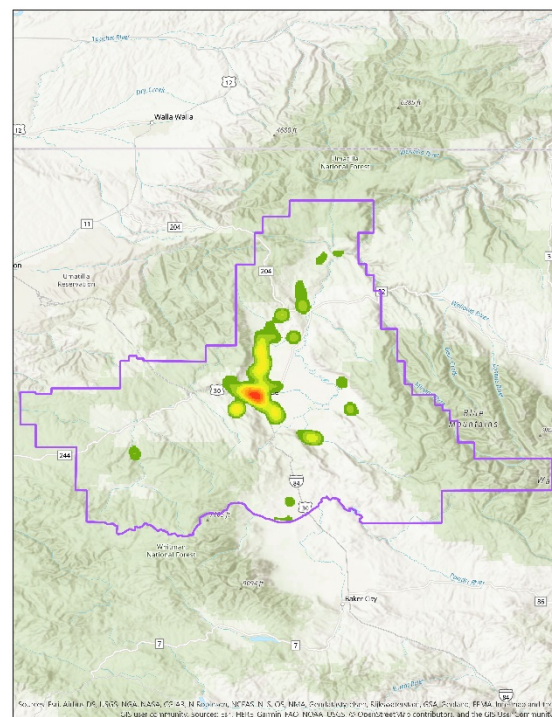


Figure 3. Graphic. Crash clustering by severity for non-State roads in Union County (2014-2018) (Source: Oregon Department of Transportation).

Crash clustering by severity in La Grande is shown in greater detail in figure 4, with Washington Avenue and Cove Avenue as two corridors of note.

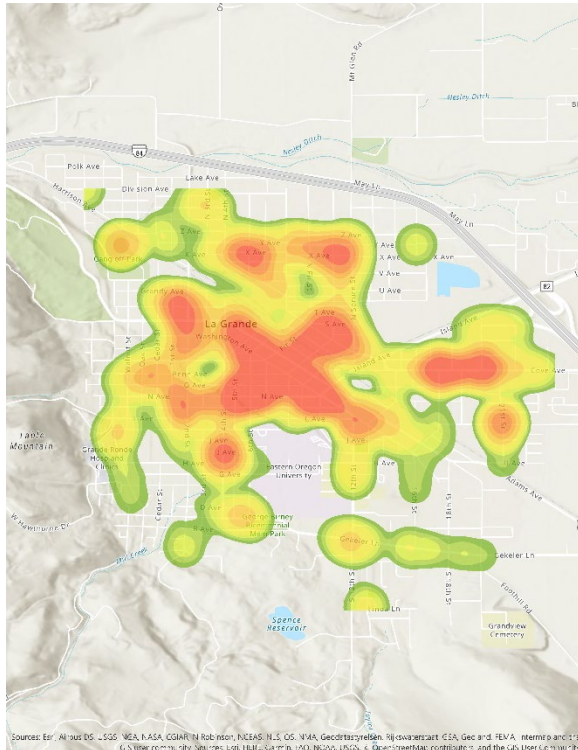


Figure 4. Graphic. Crash clustering by severity in La Grande (2014-2018) (Source: Oregon Department of Transportation).

When looking at crash factors that contributed to fatal and serious injury crashes Countywide and compared to factors contributing to crashes regardless of severity, several observations can be made: The percentages of fatal and serious injury crashes in Union County involving unbelted drivers, vehicles running off the road, or crashes involving impaired drivers are above the State average. It should also be noted that a single crash may involve more than one of these factors. Also, it is notable that one-third of crashes of all severities in the County involve young drivers, which is significantly higher than their share of the population. These crash factors help to inform how this Plan can focus on specific emphasis areas to address the greatest safety needs.

Crash Factor	% of Fatal and Serious Crashes with Crash Factor	State Average
Unbelted Driver	40%	13%
Lane Departure	60%	54%
Intersections	30%	34%
Impaired Driving	35%	22%

*In addition, young drivers are involved in 33% of crashes of all severities.*

A systemic analysis of crash factors helps to identify characteristics in crashes. While a hot-spot analysis takes a reactive approach to finding crash locations, the systemic approach takes a proactive approach by identifying the characteristics of crashes that have already occurred and applying these characteristics to identify locations where crashes may occur in the future.

Figure 5 shows a systemic analysis of injury crashes. Between 2014 and 2018, there were 199 crashes on local roads in Union County that resulted in an injury. 43 percent of the crashes were on roads classified as rural while 57 percent were on urban roads such as those in La Grande and Island City.

When looking at the set of rural crashes, two-thirds of these crashes involved a lane departure crash. For these rural lane departure crashes, those on local roads were generally found on curves while those on major collector roads were on straight segments. For the crashes in urban areas, most crashes were at intersections, regardless of the classification of the roadway.

*It is an objective of the Union County LRSP to conduct data analyses, as crash data is updated annually to determine the set of location characteristics where safety dollars can be used most effectively.*

Local Road K+A+B+C Crashes 199													
FUNCTIONAL CLASS ▶	Rural Local 37 (19%)		Rural Major Collector 45 (23%)		Rural Minor Collector 4 (2%)		Urban Collector 42 (21%)		Urban Local 24 (12%)		Urban Minor Arterial 47 (24%)		
OFF ROADWAY ▶	No 10 (27%)	Yes 27 (73%)	No 17 (38%)	Yes 28 (62%)	No 1 (25%)	Yes 3 (75%)	No 34 (81%)	Yes 8 (19%)	No 19 (79%)	Yes 5 (21%)	No 42 (89%)	Yes 5 (11%)	
ROAD CHARACTER ▼													
	Curve 2 (20%)	<b>Curve 13 (48%)</b>	Curve 3 (18%)	Curve 5 (18%)	Straight 1 (100%)	Curve 1 (33%)	Driveway 1 (33%)	Curve 1 (12%)	<b>Intersection 17 (89%)</b>	Intersection 2 (40%)	Driveway 3 (7%)	Intersection 2 (40%)	
	Grade 2 (20%)	Grade 4 (15%)	Driveway 1 (6%)	Grade 1 (4%)		Intersection 1 (33%)	<b>Intersection 28 (82%)</b>	Grade 1 (12%)	Straight 2 (11%)	Straight 3 (60%)	<b>Intersection 34 (81%)</b>	Straight 3 (60%)	
	Intersection 3 (30%)	Intersection 1 (4%)	Intersection 6 (35%)	Intersection 3 (11%)	Straight 1 (33%)		Straight 5 (15%)	Intersection 2 (25%)			Straight 5 (12%)		
	Straight 3 (30%)	Straight 9 (33%)	Straight 7 (41%)	<b>Straight 19 (68%)</b>				Straight 4 (50%)					

Figure 5. Graphic. Systemic analysis for fatal and serious injury crashes in Union County (2014-2018) (Source: Oregon Department of Transportation).



When looking at injury crashes by age group, Figure 6 shows that young (aged 16 to 20) and older drivers (aged 65 or above) are involved in a larger share of angle and rear end crashes compared to the rest of the population. In addition, young drivers are much more likely to be involved in roadway departure crashes and/or are not using their seat belt while older drivers are more likely to be involved in a crash involving a turning movement.

When looking at the time of year when crashes occur, a higher proportion of fatal and serious injury crashes occur during the summer months while non-injury crashes that only involved property damage peaks during winter months. This pattern can be explained by higher amounts of travel during better weather conditions during the warm summer months when drivers can maintain a higher rate of speed, leading to more severe crashes while the poor weather conditions in the winter lead to a larger proportion of non-injury crashes involving property damage.

		Driver Age Cohort					
		Older Drivers 66		Younger Drivers 151		Other Drivers 611	
Selected Crash Types	Angle	22	33%	44	29%	149	24%
	Rear End	8	12%	21	14%	70	11%
	Roadway Departure	7	11%	45	30%	143	23%
	Turning Movement	15	23%	17	11%	111	19%
Restraint Use	None Used	1	2%	15	10%	22	4%

Figure 6. Injury crash types by age cohort in Union County (2014-2018) (Source: Oregon Department of Transportation).

	All Injury Crashes (199)	Percent of Crashes	Property Damage Crashes (252)	Percent of Crashes
Spring (March to May)	42	21%	51	20%
Summer (June to August)	60	30%	59	23%
Fall (September to November)	48	24%	59	23%
Winter (December to February)	49	25%	83	33%

Figure 7. Injury and Property Damage crashes by time of year in Union County (2014-2018) (Source: Oregon Department of Transportation).

# Emphasis Areas

The results of the data analysis informed the selection of Emphasis Areas for the Union County LRSP. An Emphasis Area is an area of focus for this plan and is based on the fatal and serious injury statistics, with the conception that these areas represent the greatest opportunity for successfully reducing the number of fatal and serious injury crashes. The Union County LRSP also considers the Emphasis Areas in the Oregon TSAP as it is important to note that transportation safety projects in the County that address State Emphasis Areas also may qualify for Highway Safety Improvement Program (HSIP) funding.

The Emphasis Areas and their constituent strategy areas chosen for the Union County LRSP include:

## Infrastructure

*Intersection Crashes*

*Lane Departure Crashes*

## Risky Behavior

*Speed-Related Crashes*

*Education and Enforcement*

## Special Road User Groups

*Younger Road Users*

*Older Road Users*

## *Non-Motorized Road Users*

## *Tourism and All-Terrain Vehicle Road Users*

The following sections outline the strategies and actions included for each of the Emphasis Areas. These strategies and actions were developed and prioritized in consultation with stakeholders. Included are recognized effective countermeasures as well as ongoing programs administered by the County and/or State. Implementation of countermeasures involving traffic control devices (pavement markings, roadway signs and traffic signals) should adhere to the standards provided in the Manual of Uniform Traffic Control Devices for Streets and Highways (MUTCD).<sup>1</sup> Effective infrastructure-related countermeasures identified by FHWA can be found at the following website:

<https://safety.fhwa.dot.gov/provencountymeasures/>. The Crash Modification Factor (CMF) Clearinghouse also provides a rating (CMF) for the expected reduction in crashes after a specific countermeasure is implemented.<sup>2</sup>

Each action is assigned a responsible agency or group of agencies to monitor and assess its implementation. Where applicable, a crash reduction factor (CRF) identified by Oregon DOT is listed to indicate the potential reduction in crashes because of the countermeasure.

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<sup>1</sup> <https://mutcd.fhwa.dot.gov/>

<sup>2</sup> <http://www.cmfclearinghouse.org/>

# Emphasis Area #1: Infrastructure

## Strategy 1.1: Intersection Crashes

Action	Description	Responsible Agency	Priority
1.1.1	Identify and implement FHWA's proven low-cost countermeasures at stop-controlled intersections.	Union County Public Works	High
1.1.2	Enhance intersection delineation and advanced signage.	Union County Public Works	High
1.1.3	Install flashing beacons at select locations after considering lower-cost countermeasures. (CRF = 13%-28%)	Union County Public Works	High
1.1.4	Install traffic signals after considering lower-cost countermeasures. (CRF = 67%-77% for angle crashes)	Union County Public Works	Medium
1.1.5	Install transverse rumble strips in advance of intersections after considering low-cost countermeasures. (CRF = 25%)	Union County Public Works	Medium
1.1.6	Consider intersection re-configurations including roundabouts. (CRF = 78%-82%)	Union County Public Works	Medium
1.1.7	Install dedicated left- and/or right-turn lanes at key intersections. (CRF = 10%-48%)	Union County Public Works	Medium
1.1.8	Educate the motoring public on traffic control devices and other traffic engineering innovations.	Union County Public Works	Medium
1.1.9	Identify intersections with significant crash history or notable unsafe driver behavior for enhanced enforcement patrols.	Union County Sheriff's Office; Union County Public Works	Medium
1.1.10	Perform a systemic review of all intersections to determine those with marginal or insufficient sight distances.	Union County Public Works; with assistance of other agencies	Medium
1.1.11	Perform a systemic review of all intersections to determine locations that will benefit from lighting.	Union County Public Works; with assistance of other agencies	Medium
1.1.12	Perform a systemic review of all intersections for high-crash locations.	Union County Public Works	Medium
1.1.13	Continue efforts to address access management.	Union County Public Works	Medium

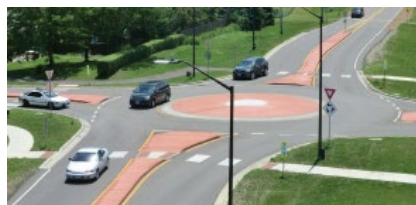


Figure 8 (left). Graphic. Example of countermeasures on the stop approach (Source: FHWA, South Carolina DOT).

Figure 9 (right). Graphic. Example of a single lane roundabout (Source: FHWA).

## Strategy 1.2: Lane Departure Crashes

Action	Description	Responsible Agency	Time Frame
1.2.1	Install Safety Edge, paved shoulders, and other shoulder treatments. (CRF = 6%)	Union County Public Works	High
1.2.2	Create clear zones in conjunction with maintenance, reconstruction, and wildlife management efforts.	Union County Public Works	High
1.2.3	Review advisory and warning signs for condition and retroreflectivity. (CRF = 16%)	Union County Public Works	High
1.2.4	Implement enhanced pavement marking type/size and enhanced delineation on curves. (CRF = 11%)	Union County Public Works	High
1.2.5	Expand the use of centerline and edge line striping.	Union County Public Works	High
1.2.6	Install guard rail at select locations such as at sharp curves. (CRF = 30%)	Union County Public Works	Medium
1.2.7	Install longitudinal rumble strips (centerline and/or edge). (CRF = 12%-22%)	Union County Public Works	Medium
1.2.8	Implement high friction surface treatments at locations with sharp curves. (CRF = 52% for crashes in wet conditions)	Union County Public Works	Medium
1.2.9	Review EMS response times and encourage reporting by all agencies.	La Grande Fire (ALS); Oregon Health Authority; Union County Public Works	Medium



Figure 10. Graphic. Example of Safety Edge application (Source: FHWA).



Figure 11. Graphic. Example of white edge lines, centerline raised pavement markers, and chevrons on a horizontal curve (Source: FHWA).



Figure 12. Graphic. Example of shoulder rumble strips (Source: FHWA).



# Emphasis Area #2:

## Risky Behavior

### Strategy 2.1: Speed-Related Crashes

Action	Description	Responsible Agency	Priority
2.1.1	Install speed feedback signs at select locations in the County. (CRF = 10%)	Union County Public Works; Union County Sheriff's Office; La Grande Police	High
2.1.2	Identify zones that can benefit from a review of speed limits and consideration of engineering treatments.	Union County Public Works; local municipalities	Medium
2.1.3	Support education programs and social media messaging to encourage drivers to avoid high-risk driving behavior.	Oregon Transportation Safety Office; Union County Sheriff's Office; School Districts	Medium
2.1.4	Implement traffic calming countermeasures such as road diets to manage speeds in identified corridors.	Union County Public Works	Medium
2.1.5	Conduct a review of speed limits on County roads, using tools such as USLIMITS2.	Oregon DOT; Union County Public Works	Low



Figure 13 (left). Graphic. Solar powered speed feedback sign (Source: FHWA).

Figure 14 (right). Graphic. Pavement marking to encourage speed reduction for impending curve (Source: FHWA).

### Strategy 2.2: Impaired Driving

Action	Description	Responsible Agency	Priority
2.2.1	Conduct targeted enforcement on key corridors; Meet quarterly to discuss implementation.	Union County Sheriff's Office; La Grande Police	Medium
2.2.2	Conduct refresher training programs on sobriety testing and DUI reporting.	Union County Sheriff's Office	Medium



2.2.3

Monitor and support (1) compliance check programs to reduce youth access to alcohol and (2) increase training opportunities for servers to recognize signs of intoxication and methods to reduce excessive drinking.

Oregon Liquor Control Commission;  
Union County Safe Communities Coalition

Medium

## Emphasis Area #3: Special Road User Groups

### Strategy 3.1: Younger Road Users (Drivers Aged 16 to 20)

Action	Description	Responsible Agency	Priority
3.1.1	Develop safe-driving and walking education initiatives to complement existing graduated licensing programs.	Oregon Transportation Safety Office; Union County Department of Health; Safe Routes to School	Medium
3.1.2	Support programs and social media messaging.	School Districts; Oregon Transportation Safety Office	Medium
3.1.3	Work with broad-based coalitions to promote traffic safety with younger users of the transportation system.	Union County Public Works; Oregon Transportation Safety Office; Center for Human Development; Safe Routes to School	Medium
3.1.4	Increase the accessibility and supporting funds for driver education programs.	La Grande School District; Oregon Transportation Safety Office	Medium
3.1.5	Identify engineering treatments to enhance safety in school zones.	Union County Public Works; School Districts	Medium

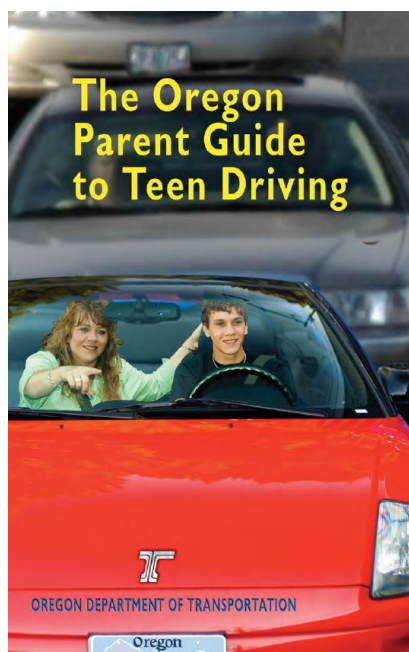


Figure 15. Graphic. Oregon Parent Guide to Teen Driving (Source: Oregon DOT).

### Strategy 3.2: Older Road Users (Drivers Aged 65 or Older)

Action	Description	Responsible Agency	Priority
3.2.1	Develop safe-driving and walking education initiatives for older users.	Oregon Transportation Safety Office; Union County Department of Health	Medium
3.2.2	Educate users about traffic control devices and refresh availability of literature.	Union County Public Works; Oregon DOT	Medium
3.2.3	Work with broad-based coalitions to promote older user safety.	Union County Public Works; Oregon Transportation Safety Office; Center for Human Development	Medium
3.2.4	Identify engineering treatments such as larger signs and improved illumination to enhance safety in areas with greater presence of older residents.	Union County Public Works	Medium
3.2.5	Educate law enforcement to recognize drivers with declining abilities and/or at-risk medical conditions.	Community Connection of Northeast Oregon; Union County Sheriff's Office	Medium

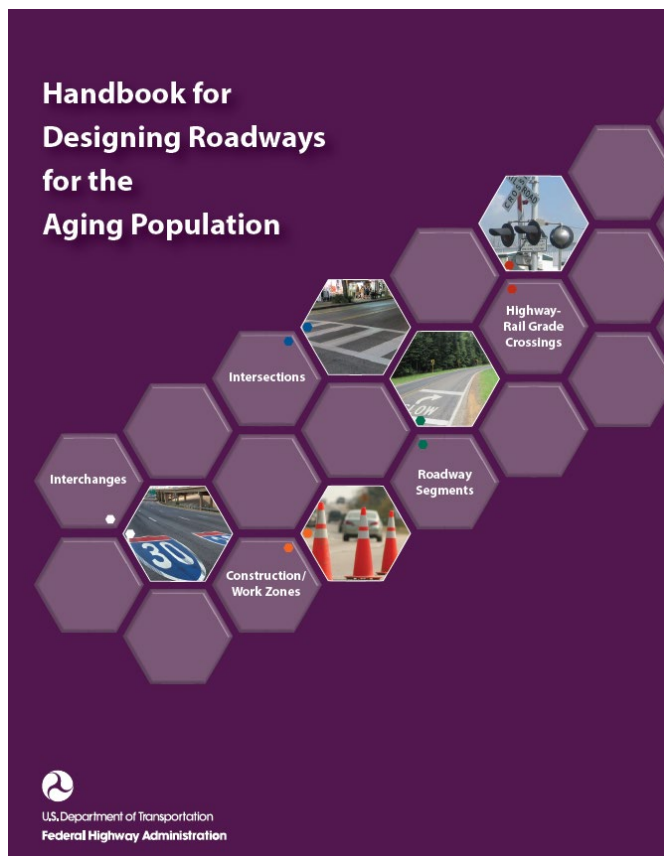


Figure 16. Graphic. FHWA's Desk Reference to the Handbook for Designing Roadways for the Aging Population (Source: FHWA).

### Strategy 3.3: Non-Motorized Users

Action	Description	Responsible Agency	Priority
3.3.1	Develop safe riding and walking education initiatives like those promoted by the Oregon Transportation Safety Office.	Oregon Transportation Safety Office	Medium
3.3.2	Support awareness programs and social media messaging to build awareness of non-motorized users.	Oregon Transportation Safety Office	Medium
3.3.3	Work with broad-based coalitions to promote non-motorized user safety.	Union County Public Works; Oregon Transportation Safety Office	Medium
3.3.4	Improve the maintenance of existing pedestrian and bicyclist facilities.	Union County Public Works; local jurisdictions	Medium
3.3.5	Consider new pedestrian and bicyclist facilities where access is needed.	Union County Public Works; local jurisdictions	Medium
3.3.6	Enforce safe walking and riding behavior.	Union County Sheriff's Office	Medium

### Strategy 3.4: Tourism and All-Terrain Vehicle Road Users

Action	Description	Responsible Agency	Priority
3.4.1	Support awareness programs and social media messaging to educate all road users, including tourists and all-terrain vehicle road users on safety.	Oregon Transportation Safety Office	Medium
3.4.2	Work with broad-based coalitions to promote road safety with all road users, tourists; and off-road users.	Union County Parks; Oregon Parks and Recreation Department; Oregon Transportation Safety Office	Medium
3.4.3	Enforce safe road user behavior by those who operate all-terrain vehicles.	Union County Sheriff's Office	Medium



Figure 17. Graphic. Oregon Friendly Driver Program to build awareness of all users of the roadway system (Source: Oregon DOT).



Figure 18. Graphic. Oregon All-Terrain Vehicle Safety Education Card (Source: Oregon Parks and Recreation Department).



# Priority Project Sites

The LRSP development process resulted in several key corridors in Union County listed below that may benefit from safety investment. These corridors correspond to outcomes from the data analysis described earlier, which identified curves on local rural roads, straight segments on major collector roads, and intersections on urban roads as those location types that account for a larger proportion of crashes in the County. While countermeasures for these sites identified below are focused on infrastructure improvements, behavioral strategies such as those for education and enforcement should work in tandem and be applied across the County. Conducting road safety audits (RSA) with a multi-disciplinary team at specific locations and corridors can assist in pinpointing safety issues and the multi-disciplinary safety strategies that will address them.

## Hunter Road

This ten mile north-south rural roadway that extends northward from Island City is the non-State road in the County that has the highest number of crashes. Over half of the crashes involve lane departure. Half of the crashes involve an injury. A quarter of the crashes occurred in non-dry conditions, similarly one-quarter of the crashes were reported to involve speed. Most crashes occur on straight segments; however, one-quarter of crashes occur on a horizontal or a vertical curve. The edge of pavement north of Woodell Lane is less forgiving than the rest of the corridor which has been improved more recently. Shoulder improvements, roadway delineation, and Safety Edge are among the countermeasures that could help to address crashes in this corridor.

## Cove Avenue

Within La Grande, Cove Avenue is an east-west street with several crashes, over half of which resulted in an injury. There is a notable concentration west of North Hall Street, which coincides with a wider road cross-section that may invite higher speeds. Among the countermeasures that could be considered are speed feedback signs to inform drivers of their speed and road diets to narrow the travel lane and encourage slower speeds and increased driver reaction time.

## Greenwood Street

Also, within La Grande, Greenwood Street has a notable number of crashes, with almost half of them involving an injury. 40 percent of the crashes occur in non-dry conditions. Notably, there are a couple of four-way intersections north of the railroad tracks that do not have any type of traffic control signage. Stop signs at these locations would provide safety benefits as they would help to control traffic entering these intersections.



## Residential Intersections

Many intersections in the residential neighborhoods throughout La Grande do not have any type of traffic control. Installing stop signs can help to control vehicle entry into an intersection.

### N Avenue

The key east-west roadway in La Grande, particularly the stretch between 2<sup>nd</sup> Street and Washington Ave, has several intersection angle crashes. The wide cross-section of N Avenue may make it possible to implement road diets to narrow the travel lane and encourage slower speeds, resulting in improved driver reaction time.

### Washington Avenue

This corridor in La Grande, which runs parallel to US Route 30, has several skew and five-leg intersections as it is the dividing line between different street grids. Navigating these intersections may be a challenge for some drivers. Depending on right-of-way, roundabouts could be implemented to manage traffic flow at these intersections.





# Funding and Alignment with Other Efforts

A key benefit of the Union County LRSP is its alignment with the Oregon TSAP. As the State has prioritized its safety funding based on its Emphasis Areas, the alignment of the Union County LRSP strategies and actions with State priorities enhances their eligibility for State safety funds. Federal funding from the Highway Safety Improvement Program to support County highway infrastructure projects is predicated on this linkage to emphasis areas, therefore, the County's alignment with the State's safety efforts is critical. In addition, Oregon's All Roads Transportation Safety (ARTS) Program prioritizes funding for local hotspot and systemic projects based on benefit cost ratios - which locations will get the most crash reduction for the cost of the project. Union County will reference the strategies and prioritized locations in this LRSP in its ARTS Program grant applications. Accessing these State and Federal funds help to supplement local funding for projects stemming from this LRSP.

In addition, federal behavioral safety grant funding from the National Highway Traffic Safety Administration and managed in Oregon by the Oregon DOT's Transportation Safety Division is available on an annual basis. The County's road funding, which is funded through the gas tax, is the major local funding source for roads and priorities identified in this LRSP will be considered in the selection of County road projects. The County will also seek opportunities to implement safety

projects in conjunction with routine road maintenance projects.

The strategies and actions in the LRSP can also link to the current and future updates of County transportation-related plans as well as local community transportation and comprehensive plans.

Bringing these various County plans and programs into alignment with the LRSP has the potential to reduce administrative burden, encourages the use of consistent data and analysis methods, and allocates resources to identified locations and programs ultimately to effectively produce safety improvements for the greatest safety needs in the County.

# Evaluation and Future Updates

The sixth step of the LRSP process is to evaluate and update the plan. Union County safety stakeholders will meet and communicate regularly to evaluate the progress of implementation and the impact of the LRSP on fatalities and serious injuries. They will evaluate each emphasis area individually and the Plan to determine if goals are being met.

Evaluation will be in the form of process and outcomes. Process evaluation involves reviewing each numbered action under the strategies in the LRSP and determining if progress has been made. Outcome evaluation looks at the impact of activities. For some projects, such as site-specific ones, it is relatively straightforward to determine safety impact based on pre-construction and post-construction crash statistics. For other projects, it may be a combination of several activities that lead to a change in crash frequency. For example, a change in the frequency of impaired driving crashes may be a result of a combination of educational and enforcement initiatives. Therefore, because of the interrelationship between different safety activities in the County, it is ideal to evaluate outcomes at the emphasis area level. The Lancaster County Rural LRSP can use fatalities and injuries as the metric for annual progress in each of the emphasis areas. Evaluations should

consider more than just crash frequency, if possible. Changes in traffic volumes, crash severity, and characteristics of crashes also provide meaningful insight into the effect of safety countermeasures. The Highway Safety Manual (AASHTO, 2010), which is non-binding, provides further information on different performance measures and evaluation methods.<sup>3</sup>

The County recognizes that some strategies may take several years to fully implement. Additionally, it may take several years to realize the benefit of the strategies through a reduction of fatal and serious injury crashes. As the sites and corridors for the Plan is based on crash data analysis as well as additional systemic analyses conducted by Oregon DOT and Union County, the quality and availability of this data to determine the impact of safety investments will play an important role in helping to update Plan priorities

Like the Oregon Transportation Safety Action Plan, a full update of the Union County LRSP is expected to be completed every five years. However, more frequent updates to the individual strategies and actions may take place to reflect Plan progress and any new policies that accelerate or hinder implementation.

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<sup>3</sup> AASHTO, 2010. The Highway Safety Manual, American Association of State Highway

Transportation Professionals, Washington, D.C., <http://www.highwaysafetymanual.org>



# Acknowledgements

This plan was made possible through the cooperation of the following partners:

Union County Public Works

Oregon Department of Transportation

Oregon Bicycle and Pedestrian Advisory Committee

City of Cove

City of La Grande

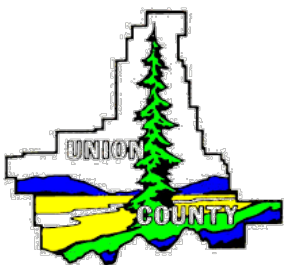
Center for Human Development

Safe Communities Coalition

Federal Highway Administration, Office of Safety

Federal Highway Administration, Oregon Division

VHB



**Union County Public Works**  
**10513 N McAlister Road, PO Box 1103**  
**Island City, OR 97850**